

REMARKS

Claims 1-3, 5-24, and 26-31 are pending in this application. By this Amendment, claims 1, 10, 14, 17, 18, 28, and 31 are amended. No new matter is added.

I. Formal Matters

Although the application was accepted for initial examination, the Patent Office now asserts that claims 1-3, 5-24, and 26-31 are rejected under 35 U.S.C. §101 and 35 U.S.C. §112, first paragraph for allegedly having no well established utility. Applicant respectfully traverses these rejections.

Applicant believes that the Examiner is misunderstanding various aspects of the invention. For example, although the Office Action correctly identifies that paragraphs [0001] to [0003] teach that a benefit of the inventive craft is reducing pressure forces acting on the craft and reducing effects from gravitational pull, the Office Action appears to assume that the electromagnetic aspects of the invention provide a main propulsion system for the craft. For example, paragraphs 10, 11 and 15 of the Office Action indicate that it would have been obvious to use the propulsion system from the 739 patent "for the purpose of providing a redundant propulsion system to prevent the aircraft from crash landing in the case where the electromagnetic system fails" (emphasis added). However, Applicant's paragraphs [0034] - [0037] clearly set forth that main propulsion for the craft is achieved by various jet engines. Applicant's paragraphs [0003] and [0011] clearly point out that the primary utility in the electromagnetic structure is reduction of aerodynamic drag and pressure on the craft, heat reduction on the craft, etc.

Thus, Applicant does not allege that the electromagnetic structure provides a main source of propulsion.¹

Accordingly, Applicant's specification does provide a credible utility. Moreover, one of ordinary skill in the art would readily recognize the credible utility of the invention. As described in Applicant's paragraph [0012], the fundamental operation of the claimed electromagnetic field, which "curves" space at the immediate vicinity surrounding the craft, can be likened to well-established magnetic properties. One disclosed example is an operational MAGLEV train that magnetically curves the space between the train and the track to push the train slightly off the ground to provide an air bearing. This technology is based on the scientific principle developed by Albert Einstein that like poles of a magnet repel and opposite poles of a magnet attract. Similarly, when one observes a strong magnet near a body of water or light one can see a slight displacement of the water and light. These observations further demonstrate the physical phenomena that occurs to particles, such as water or light, when close to a strong magnetic field.

Based on these known phenomena, one of ordinary skill in the art would have been readily able to recognize that the invention could be used to reduce aerodynamic pressure forces and/or heat acting on the craft by selectively creating an invisible magnetic force field that occupies the space immediately surrounding the craft to repel at least some of the particles in the vicinity the craft away from the craft during flight (aerodynamic efficiency and prevention of contact damage) and to repel some of the heat off of the craft's surface (heat

¹ Paragraph [0014] does indicate that once earth's atmosphere is left the magnetic field can be used to provide a supplemental repulsion force that can be used to propel the craft. However, once in space, there is minimal or no resistance and the smallest of rocket boosters are known to provide propulsive or directional control forces to a spacecraft. Thus, in a near zero resistance environment such as this, even a negligible magnetic repulsion force could credibly serve to at least control the attitude of the craft. Thus, even this feature has a recognizable credible utility.

reduction). Thus, while in flight, Applicant's craft travels through a controllable magnetically curved space (the area immediately surrounding the craft that is being acted upon by the electromagnetic field). These are credible and useful functions that one of ordinary skill in the art would be capable of using based on Applicant's teachings.

Accordingly, Applicant's claimed invention has credible utility. Withdrawal of the rejections is respectfully requested.

Although the Office Action requests a working model to demonstrate a credible utility, it is believed that such a requirement is rendered moot by the explanations above, which remedy the apparent misunderstanding of the invention and provide well-known observable phenomena that can readily explain the scientific principle behind Applicant's electromagnetic structure. Moreover, the Examiner can simply examine the phenomena himself by taking two conventional magnets and feeling the magnetic attraction/repulsion (albeit on a much smaller scale) and observing the effect on any particles, such as iron or water. Withdrawal of this requirement is respectfully requested. However, should any issues remain, Applicant's representative will be available for a personal interview.

II. Pending Claims Define Patentable Subject Matter

In the Office Action, claims 1, 6, 10, 15 and 16 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,797,563 to Blackburn et al. This rejection is respectfully traversed.

Regarding Blackburn, Applicant believes that the Examiner is lacking factual support for his assertions. In particular, with respect to the claims directed to a "saucer-shaped" craft, reliance on Fig. 3 is improper. Fig. 3 does not conform to the other embodiments and does not even relate to a fuselage. Instead, it is an obscure reference to a representative sectional view of a magnet, which is not a craft's fuselage, showing lines of force. The remainder of Blackburn's embodiments clearly relate to a fixed wing aircraft in which electromagnets are provided only on the wings. Thus, there is no clear teaching of applicability to a saucer-

shaped craft. Moreover, indication that Blackburn is applicable to a submersible craft are also in error since the propulsion source is a turbofan engine, which cannot operate under water.

Moreover, Blackburn relies on RF microwave heating of oncoming air to ionize and charge the particles through heating to reduce their mass density. Then, these positively charged particles are repelled outward perpendicular to the craft's fuselage while negative ions are attracted to the wing (Fig. 2 and Cols. 7 and 20). Thus, Blackburn relies on the RF heating to charge the particles in the air and the electromagnetic aspects for repelling or attraction of certain charged particles. However, because the RF heating would appear to uniformly and consistently charge the particles, there would appear to be no need to have multiple, sectionalized electromagnetic plates and individually change the polarity of certain sectionalized isolated plates as claimed. Rather, it would appear to one of ordinary skill in the art that the plates would always have the same polarity. Thus, the Examiner's comment in paragraph 7 on page 4 that the plates are "independently changeable between North and South polarity" is inaccurate and not factually supported by the Blackburn teachings.

However, Applicant is able to selectively control the sectionalized plates to produce a desirable electromagnetic radiation profile. For example, the lower fuselage may be adjusted to the prevalent pole of earth's closest magnetic pole and can change this setting when the craft switches to another part of earth's hemispheres. It can also be adjusted so that the various plates move or block particles in the vicinity of the craft, such as to distribute heated or charged particles near the craft to offset a heat buildup in certain regions (Applicant's paragraph [0011]).

Because Blackburn fails to teach each and every feature of independent claim 1, this claim and claims dependent therefrom are not anticipated. Moreover, because the entire principle of operation of Blackburn is different from the claimed invention and relies on RF

microwave heating, one of ordinary skill in the art would not have been motivated to modify Blackburn as claimed. Withdrawal of the rejection is respectfully requested.

In the Office Action, claims 1-3, 6, 7 and 11 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,891,600 to Cox . This rejection is respectfully traversed.

Regarding Cox, Fig. 38 does appear to show a "saucer-shaped craft." However, Cox only provides plates on the top exterior surface of the fuselage. The lower fuselage has no such plates. Moreover, Fig. 38 in Cox relied upon by the Examiner clearly discloses use of a single coil assembly. Thus, at most there can be only one common plate structure. It would appear impossible with this structure to have individual sectionalized plates change polarity as claimed. Although the Examiner alleges that the plates must inherently change polarity to convert from stored electrical energy to magnetic field energy, all of the plates would uniformly change polarity and would not be individually changeable as claimed.

Because Cox fails to teach each and every feature of independent claims 1 and 17, these claims and claims dependent therefrom would not be anticipated by Cox. Moreover, the purpose of the magnetic structure in Cox is to serve as a propulsion source by exciting atoms of nitrogen gas in the atmosphere to a higher quantum level, causing the dipoles to rotate and cause a reactive thrust. Because of this purpose and to attain vertical thrust, Cox if anything teaches the desirability of maintaining the same orientation of forces. Thus, there is no motivation to modify Cox as alleged to achieve independent changing of individual plates as claimed. Withdrawal of the rejection is respectfully requested.

In the Office Action, claims 8, 9 and 14 are rejected under 35 U.S.C. §103(a) over Cox in view of U.S. Patent No. 6,367,739 to Paterro. Additionally, claims 17-19, 21, 22 and 27 are rejected under 35 U.S.C. §103(a) over Cox and Paterro. These rejections are respectfully traversed.

Cox is discussed above. Paterro fails to overcome the deficiencies of Cox with respect to independent claims 1 and 17. Accordingly, these claims and claims 8, 9, 14, 18, 19, 21, 22 and 27 dependent therefrom are allowable for their dependence on allowable base claims and for the additional features recited therein. Withdrawal of the rejection is respectfully requested.

In the Office Action, claim 20 is rejected under 35 U.S.C. §103(a) over Cox and Paterro, further in view of U.S. Patent Application Publication No. US2003/0127559 to Walmsley.

Cox is described above. Walmsley fails to overcome the deficiencies of Cox and Paterro with respect to independent claim 17. Accordingly, claim 20 is allowable for its dependence on allowable base claim and for the additional features recited therein. Withdrawal of the rejection is respectfully requested.

In the Office Action, claims 12, 13 are rejected under 35 U.S.C. §103(a) over Cox in view of Paterro further in view of ordinary skill in the art; claims 23-24 are rejected under 35 U.S.C. §103(a) over Cox in view of Paterro further in view of ordinary skill in the art; claim 28 is rejected under 35 U.S.C. §103(a) over Cox in view of Paterro further in view of Walmsley; and claims 29 and 30 are rejected under 35 U.S.C. §103(a) over Cox in view of Paterro. These rejections are respectfully traversed.

Claims 12-13, 23-24, and 30 are allowable for their dependence on allowable base claims and for the additional features recited therein.

Moreover, none of the applied references teach a high frequency oscillator in the form of a ring externally provided around the periphery of the hull or in the form of a long tube provided in a cavity defined between adjacent electromagnetic plates. The Office Action alleges that rearrangement would involve only routine skill. However, the applied art fails to appreciate advantages achieved by the specific locations claimed. Although there may be

countless locations where an oscillator could be located, Applicant has found distinct advantages to placement in areas near the electromagnetic plates, but not within a main cargo or living quarters of the craft. The recited locations thus maximize storage capacity by placing the oscillators at locations that would otherwise be unused space (within cavities in the plates or externally around the periphery of the hull). Moreover, the location of the external ring provides ready access to the oscillator for maintenance and ready access to the plates. These specific locations would not have been obvious in view of the generalized teachings applied. Thus, independent claims 28-29 having such features would not have been obvious.

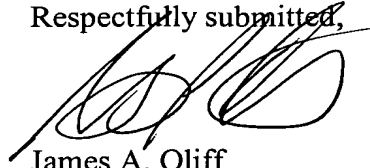
Furthermore, independent claim 29, as well as independent claims 1, 17 and 28 recite that the plates are "sectionalized plates" and that each of the plates includes "an outer wall and an inner wall fixedly provided on an electromagnetic core" and that the core includes "at least one turn of coil." The alleged walls in Cox (904, 906) are capacitor plates that provide structural support for the coil winding 900 through insulative standoffs 92 (Figs. 38-39). These plates are common and not sectionalized. Moreover, besides having only a single common coil, the alleged plates (904, 906) are not fixedly provided on the core. Instead, upper wall 904 in Cox is mounted on an insulator 908 mounted to lower plate 906 rather than to the core. Thus, even if the alleged combinations were made, the combination fails to teach the subject matter of independent claims 1, 17, 28 or 29.

Withdrawal of the rejections is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of pending claims 1-3, 5-24 and 26-31 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: February 21, 2006

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